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## BEFORE CYBERSPACE: LEGAL TRANSITIONS IN PROPERTY RIGHTS REGIMES

RICHARD A. EPSTEIN\*

Everyone knows that the information age is fast upon us, and that it has worked and will work major transformations in who we are and what we do. A quick glance through my resume will reveal that I am not the man to chronicle those movements as we wade into the complications of intellectual property, cyberspace, and the information age. The only reason why I am qualified to speak after dinner at this event is that I have been invited to do so by my friend (and, as of the date of this publication, colleague) Lisa Bernstein, who thought that a general overview of the role of the law of cyberspace in the intellectual firmament should not be immersed in jargon and technical details. I was her precommitment strategy. So she told me to pick a topic that was sufficiently vague to allow me to say whatever I chose, and to that request I promptly acceded.

Unfortunately, my conclusion is all too iffy (and all too prudent) for my taste. It is that the innovations of technology neither preclude nor require fundamental transformations in the legal regime that governs them. In all cases the key issue can be framed as follows: because transitions in legal regimes are always costly and sometimes go astray, can one show that the rules of the past are so ill-fitting that some conscious and costly deviation from them is appropriate? No categorical answer is possible, for so much depends on how ill-fitting the old legal system is, how painful the transition is, and how well the new system would operate. The best we can do is to establish a weak presumption in favor of the continuation of the old legal order, given the inevitable costs of reorientation. Yet presumptions solve less than we hope because the diverse circumstances under which they are tested resist any uniform legal theory. With these inevitable caveats, this talk will address the future through the past. I shall talk about

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some of the historical antecedents to the coordination problems of our modern information age. Even though the technology is novel, the basic premise is not.

With that said, my next move is an abrupt transition of my own. The attitude that I bring to these questions is heavily influenced by my own early legal education. My initial legal studies were at Oxford, which makes me an instant outlier. There the first course I ever studied was Roman Law. My first topic was Roman Contract Law, where my initial assignment asked me to trace the evolution of the contract of *stipulatio*: unilateral verbal contracts in which the correspondence between question and answer created the obligation. Even the innocent contract of stipulation had its technical side: what should be done with agreements at a distance when verbal communication was not possible? The introduction of writing provoked an important transition in contractual regimes. Early on, writing became evidence of the oral transaction, and over time a substitute for it, which should be expected as writing became cheaper and more widespread.

From my initial foray into Roman Law, I have always had an interest in historical materials as windows through which to examine the modern age. Often my instinct is that changes in technology are advanced as a pretext for a transformation from one set of legal rules to another, when the real reasons for change rest on a longstanding dissatisfaction with the previous rules. My views on this issue were first crystallized in a 1980 paper entitled *The Static Conception of the Common Law*,<sup>1</sup> which maintained that technological changes did not fuel changes in legal rules. What was good enough for the second century A.D. is also good enough for us. Indeed, the position still seems sound on such critical matters as the basis of tort liability and remoteness of damage. The challenge is to give functional reasons for antiquarian preferences. Even in 1980 I was aware of some exceptions to the basic principle that the optimal legal rules are invariant to social changes. Now my intention is to revisit the subject by examining whether and where technology drove legal transitions, and did so in a beneficial fashion.

This discussion begins with property rights in ourselves, including our talents, athletic abilities, moods, and dispositions. Following those are the rights that we have in things external to the self, both

1. Richard A. Epstein, *The Static Conception of the Common Law*, 9 J. LEGAL STUD. 253 (1980).

tangible and intangible. Is the ideal configuration of rights in these departments subject to change as a function of technology?

Start with individual talents and labor, and my categorical answer is “no.” No one can, or will, find a change in technology that drives us away from the baseline of individual autonomy or self-control. Short of wartime necessities, I cannot think of any reason that requires a deviation from the strong individual rights that allow individuals to control the use of their talents and to pick out the individuals with whom they wish to associate and the terms on which they wish to conduct their affairs. I recognize that many earlier regimes placed limitations on the individual’s capacity to contract—women and slaves are obvious examples—but I think that those rules had as little normative justification then as they do now. Strong autonomy rules for labor and natural talents work well because it is very difficult for any single person to obtain, except by illegitimate government coercion, a stranglehold on the opportunities made available to other individuals. The position therefore is one that embraces free entry and exit on both sides of labor and associational markets. Make no mistake about it, entry and exit are the best guarantors of choice for all persons; the threat to leave is credible, is cheap to enforce, and produces responses that induce most people to cooperate most of the time. Today, as the cost of contracting drops, and the range of trading partners expands, the autonomy principle is, empirically, better grounded than it has ever been before.

How strange therefore it is that in recent years the forces of regulation have made their greatest strides in labor markets! Indeed, it is precisely because government intervention has limited the range of effective choice in many labor markets that we have needed additional regulations to offset the monopoly power so created. The linchpin of modern labor law in the United States (and elsewhere, I dare say) is to confer monopoly power on labor unions, which in turn requires correlative state-imposed limitations on their ability to negotiate at will. The definition of that offset is not subject to any precise metric, and so the obligation to bargain “in good faith” is born.

The advent of the information age makes state-sanctioned monopolization less necessary (and less effective, I might add) because cheap information will increase the range of potential trading partners. Cheap information will lead away from large firms with massive labor forces, all of which operate in fixed proportions; it will

lead to just-in-time contracting, temporary services, consulting firms, and a bewildering network of semi-permanent and spot transactions. It will also lead to a change in the content of the underlying exchanges. The blacksmith of one generation becomes the web site engineer of the next. We should welcome this proliferation of arrangements, but we do not have to change the law of contract. People will still want to be paid for services rendered, so that meeting the requirement of consideration will pose no difficulty in the vast range of routine transactions. Surely some doctrine of offer and acceptance will be with us until the end of time. What should change are the kinds of offers made and accepted.

The changes in the terms of contracting will not be arbitrary. One obvious point is that information counts for more in an information age—at least in the sense that a greater fraction of our total social wealth will be tied up in information than in previous times. One hard question is whether parties should be allowed to restrict the movement of labor in order to protect the secrets that they have entrusted with their employees. The choices here are difficult because the turnover in labor necessarily compromises exclusive rights in trade secrets that relate to everything from technical processes to customer lists. So the hard cases involve the new terms of labor contracts, at a time when secret information is of far greater value than ever before.

Yet all firms will confront a *de facto* veil of ignorance problem. They want to rein in their own employees so that valuable proprietary information will not find its way into a rival's hands, yet they need to have access to employees now working for other firms, who could easily be bound by similar restrictions. A general principle of free movement of labor both benefits and hurts all firms; such is also the case with a system that honors covenants not to compete or to work with a rival. The only question is which set of inconveniences bites more deeply, and in our high-tech time, it seems that the free movement of labor will win out in the end.

The best explanation for this outcome is that firms can find other ways (always at a cost) to protect their secrets. They can divide their work product across several teams, so that the value of information will be less apparent to the new employer who only sees a small piece of the overall picture. Employers can offer compensation packages, whether in cash or stock options, to employees that are back-loaded, so that payment comes only after the new technology reaches the

market—so long as the employee sticks with the venture. They can count happily on the general depreciation in the value of trade secrets as well, owing to the furious rate of progress within the industry. I would of course enforce explicit covenants not to compete to the extent that they make the restrictions clear. But employees know that mobility is a way of life in the high-tech industry, so my bet is that prospective employees will resist these covenants in most cases: carrots will, at a rough guess, be more effective than sticks. The traditional rules of contract law should prove equal to the legal challenge of preserving control over proprietary information.

The control of labor has another important dimension in the protection of intellectual property, which is one of the outgrowths of ordinary labor. The ancient world had no regimes to govern copyrights and patents. Without systems of mass production, the creator of an intellectual work had to pay someone else to produce it. Only when the printing press replaced the scribe did the balance of trade run in the opposite direction and give rise to the need to protect intellectual property. The temptation is to imitate the rules on exclusion for physical property. Yet it is a temptation that, to some extent, must be resisted, given that the additional spur to the creation of intellectual property reduces the likelihood of its wide dissemination once produced.

Those complications take over the teaching of a course in patents and copyrights. For our purposes, the central point is to recognize that transitions in legal regimes have also taken place with physical property. It is appropriate to say a few words about them. Last year I asked my seminar in telecommunications what technological change they thought had the greatest impact on the organization of property rights regimes. Refrigeration was what one gifted student answered. He had a point, of course, because the new technology made it feasible for slaughterhouses to move west from Chicago, closer to cattle country. That said, I told him to go back further and to think on a grander scale. My choice, hardly novel, was the shift from a hunter-gatherer society to an agricultural one. The most profound effect of this transformation was that it led to the rise of permanent individual property rights in land. Before agriculture, no one invested heavily in improving land, so exclusive property rights tended to cluster in chattels of various kinds, on which labor had been expended. Once cultivation of land became desirable, however, permanent rights in land had to be devised to secure a return on the

initial investment in removing stones, building fences, and plowing fields.

"Sow, that you may reap" catches the agricultural origins of property rights, but, ironically, it understates the proposition by suggesting that property rights are good so long as they last for a single growing cycle. Yet clearing land and building fences are improvements that come at a great cost and require a longer payout period. So this agricultural metaphor is a somewhat imperfect expression of the recognition that long-term property arrangements are needed to supply the proper incentives to invest. From these technological changes came Blackstone's axiomatic version of the fee simple: "as that sole and despotic dominion which one man claims and exercises over the external things of the world, in total exclusion of the rights of any other individual in the universe."<sup>2</sup>

The pattern of behavior here is not confined to common law institutions. Rather the economic forces are so powerful that they force a convergence among legal systems that have few common antecedents. The Hawaiian situation with the great mehele (the land division around 1850)<sup>3</sup> showed a remarkable parallel. The system of communal lands was not able to survive the arrival of western investment. No one would build extensive private holdings on common lands. Some division, therefore, was needed to put the once-common resources in the hands of the private individuals who could give durable title to third party interests.

A similar transition took place with respect to the capture of wild animals. When capture was solely for consumption and not for sale, a rule that allowed unlimited hunting worked quite well. The use limitations placed an effective constraint on the level of capture. But once potential sales to Europeans expanded the short-term gains from capture, this structural inhibition was removed, and the danger of extinction from overhunting became real. In that setting, a shift to a regime that gave individuals hunting territories might have cost more to organize and enforce, but it also generated higher sustainable yields. The well-rehearsed Demsetz story on the soundness of the transition makes sense, even if he overlooked some of the bumps along the way.<sup>4</sup> Transitions, it should never be forgotten, have clear

2. 2 WILLIAM BLACKSTONE, COMMENTARIES \*2 (1766).

3. See *Public Access Shoreline Haw. v. Hawaii County Planning Comm'n*, 903 F.2d 1246, 1271-72 (Haw. 1995) for details.

4. See Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. 347 (1967).

allocative gains, but they carry with them substantial risks of intrigue and abuse. The greater whole could be advanced while some small players are wiped out. We should not ignore these pathological byproducts simply because the overall process seems to work well.

The theme of transitions is equally important in dealing with water rights. In situations in which the private demand for water is limited, groups have little need to place formal legal constraints on consumption. The shift to agriculture placed heavier demands on water consumption, and the rise in scarcity brought a need to reexamine the structure of legal rights. The early riparian system of proration was not an ideal allocation device, but its simplicity worked well to assure that all had minimal supplies in times of scarcity, and shared in the bounty of good times. That system prevented systematic private actions that could destroy the value of a river as a commons for transportation, aesthetics, fishing, and bathing. In those western settings where riparians could not make the best use of water (because their lands were atop a gorge) and where ranchers had to make heavy investments to use the water they removed, prior appropriation systems took hold. These systems tended to downplay the importance of instream use, and set up the same set of transition problems found with land and wild animals. But they did represent on balance a sensible response to differences in both topology and technology.

In sum, by looking at the evolution of property rights in land, animals, and water, a simple pattern emerges: where investment must proceed consumption, systems of durable property rights are necessary for social stability. No legal system could rely on a system of usufructuary rights. It is quite correct to argue that bountiful natural resources and domesticated animals and plants are preconditions for the shift from primitive to modern society. Yet it is perhaps too easy to overlook the other side of the coin, as I think was done by Jared Diamond in *Guns, Germs, and Steel*,<sup>5</sup> by ignoring the legal regimes that govern resource use. The abundance of resources can be dissipated without effective property regimes to govern their use.

5. JARED DIAMOND, *GUNS, GERMS, AND STEEL: THE FATES OF HUMAN SOCIETIES* (1997).



## THE RETURN OF THE COMMONS

The program that I have described thus far is one of privatization. It is easy to assume that technology and legal advancement push uniformly in that direction, but that would be a mistake. Land and other forms of property have mixed uses, and the ideal configuration of the rights for one use may be inappropriate for another use. To add to the difficulty, it could well be that both uses have value when conducted simultaneously. Is it possible to find property systems that are flexible enough to adapt to these conditions?

The answer seems to be yes. With respect to land, agriculture is a compact use, while hunting could commence with a chase that starts in one location and ends in another. The creation of easements in land, which allow the chase to continue so long as the crops are not disturbed, is an affront to Blackstone's principle of absolute exclusion. Yet the rise of customary practices of just this sort shows that it is possible to devise sound economic solutions that work because every member of the community can take advantage of the practice. The powerful dose of reciprocity of interest explains why we can rise above principle and qualify Blackstone's vision of property rights in ways that improve the lot of us all. The resulting mixture of property rights represents the kind of trade-offs that we must live with in all our affairs. The system of concentrated property rights that allows for new construction hampers various forms of movement. What is true for hunting is also true for communication and cyberspace. So we move one step closer to our computer world.

The developments with hunting in the seventeenth century recurred on a far grander scale with transportation and communication in the nineteenth century. Square enclaves and castle strongholds were of little use for railroads and telegraph. These were industries that required linkages from one place to another. They did not require concentrated investments in single identifiable locations. The great challenge was to figure out the regime of property rights that was most congenial to the emergence of these technologies. The outcome involved mixed regimes that could take into account the need for both conventional and special ownership. With that came special franchises, common carrier obligations, and rate of return regulation, precisely because the ethic of exclusion could not carry over into the world of network industries.

Yet even here, the problem has more prosaic antecedents.

Highways are networks with open access. These require public investment and decisions on such matters as location and size. Someone has to determine where they should be built, and how the land should be assembled. The holdout potential of a single individual who possesses some critical parcel of land is something that calls forth the use of condemnation power and brings in tow the full range of questions on takings and valuation. In this context it does no good to lament the inability of government agencies to assess private preferences and to make collective decisions. The Hayekian bias against planning certainly has its place when private solutions are available, as is the case with the allocation of broadcast and other communications frequencies.<sup>6</sup> But the criticism of planning has to be directed only towards its excesses. Network industries often create the necessity for some collective response; the only question is what kind. The general sort of skepticism about public knowledge of private preferences cuts too deeply, for it precludes any estimation of better and worse choices in system design and financing. Although the case law doubtless contains some serious errors, a close examination of the rules governing special assessments for infrastructure improvement as these emerged in the post-Civil War period, would pay handsome dividends. Who decides (and by what vote) what projects should be undertaken? Who decides how to apportion the cost of an open access system that provides differential benefits to the individuals who live in close proximity to key elements of the overall system? What adjustments should be made to take into account differences in the intensity of use, such as between automobiles and trucks? It is not enough just to have differential rates; it is also important that the differentials reflect the actual differences in the burdens that different user classes place on the system as a whole. If one twenty-ton truck causes ten times the damage of ten two-ton cars, then the appropriate tariff differentials should not be ten to one, but 100 to one.

Railroads present different challenges. Only a limited number of firms will gain access to the network, which must be integrated to allow the free movement of cars. By the same token, ordinary shippers have to be able to gain access to the freight and passenger cars even if they cannot gain direct access to the road itself. The

6. See generally FRIEDRICH A. HAYEK, *THE ROAD TO SERFDOM* (1944); F. A. HAYEK, *THE CONSTITUTION OF LIBERTY* (1960). But see Richard A. Epstein, *Hayekian Socialism*, 58 MD. L. REV. 271 (1999) for a criticism of this view.

development of that integrated network again requires estimation of costs and benefits of participation that do not mesh with Blackstone's model of exclusive property.

The question still arises whether it is possible to graft on private property systems to common property arrangements. Fortunately, I think that the answer to this question is yes. The pattern of development with roads and rails shows how this can be done. Let us suppose that one has a network of roads to which all people have the right of access. The natural temptation is to assume that the only individuals who want to connect to the network are those who have their cars parked in their garages. That may well be a common case, but surely it is not the only one. A private association of homeowners has to have access to the public roads. But it can certainly post guards at the entrance gates to see that only members and their guests enter the subdivision. But the subdivision is in fact a *second* local commons to which all the association's members have access and for which they have to pay some appropriate maintenance assessments. There are, in effect, ways to hook networks to networks.

The principle is capable of extension. If it can be done once, it can be done many different times. This one feature allows for expansion of the overall system in ways that reduce the fraction of the system that has to be open to all. The creation of these independent subnetworks thus increases flexibility in the operation of the whole system while reducing the level of public law needed to guide the formation of the subnetworks. Indeed the solutions that are adopted to handle the local bottlenecks in these privately-created commons might help with the larger public problem by giving us some guidance in structuring the overall system. And I have no doubt that the percentage of individuals who are hooked into these subnetworks will increase on the Internet, as has happened with the homeowners' associations.

The integration of public and private systems of course takes place in telecommunications when any business installs an exchange network inside its office. I think that academic lawyers should pay more attention to the emergence of network industries, and to the common carrier rules that govern them. Fortunately, I expect that more attention will be directed to the way the 1996 Telecommunications Act has fundamentally changed the structure created under the 1934 Communications Act. In dealing with the elaborate rules for interconnection among the various classes of carriers, it is important

to remember that these are modern outgrowths of similar problems that arose toward the end of the nineteenth century. In addition, the common carrier law has a long tradition of universal service, which itself has been understood in two separate ways. The first is that all persons should be allowed access to the network, but no class of users should be required to subsidize another. Here the point of legal intervention is to overcome the coordination problems that define network industries. In contrast, the modern view, which has been more aggressively promoted under section 254 of the present Telecommunications Act, regards redistribution and subsidy as its *raison d'être*, only to promote the usual response of excessive demand in the absence of rationing by price.<sup>7</sup> But the problem of cross-subsidy is both more difficult to identify and more difficult to ferret out in network industries precisely because the Blackstone model of exclusive property no longer describes any basic features of the system.

Yet even if we are intent on avoiding subsidies, it is very difficult to figure out the proper pattern of pricing for these network services. The front end costs are substantial; yet the return on the investment is determined at least in part by the rates permitted under regulation. There have been a number of approaches to this problem: sometimes rate of return is calculated off the cost of the original investment, leaving the ratepayers with the risk of poor investment choices. In other cases, a higher rate of return is allowed on a smaller rate base; now the public utility takes the risk that future investments will go awry. There is no doubt that the model of exclusive property rights lends itself to the emergence of pure competitive industries in a way that is just not possible—*notwithstanding the hype to the contrary*—in network settings.

It is also clear that the emergence of these network industries created unanticipated pressures on constitutional doctrines. The classical tradeoff is simple to state and hard to solve.<sup>8</sup> Keep the rates low to avoid monopoly gouging by the providers, and the law increases the risk of confiscating the invested capital of the regulated industry. Set the rates high enough to avoid that confiscation, and the firm might well be able to reap monopoly profits that would deter

7. See Mike Mills, *FCC Pares School Internet Program*, WASH. POST, June 13, 1998, at D1; Seth Schiesel, *Budget Is Cut for a Plan to Put Schools and Libraries On Line*, N.Y. TIMES, June 13, 1998, at A8.

8. See *Duquesne Light v. Barasch*, 488 U.S. 299 (1989).

efficient use of the system. That difficulty just does not emerge in the world with exclusive rights in property that firms are able to competitively price.

The proper intellectual stance in this setting is one of ceaseless marginal adjustment. Never seek perfection because you will not find it; never give up because improvements are always possible. Recognize that it is often dangerous to tinker with a system that works, but equally dangerous to keep a system of rate regulation unresponsive to major changes in technology (e.g., the introduction of cellular phones) that could obviate some of the major costs associated with the operation of the system (e.g., a single monopoly supplier of the "last mile" of the system). Strong libertarian dogmatism has to be tempered in dealing with these questions of network design and rate regulation.

The problems of rate regulation carry with them serious ironies. The level of interconnection that one sees in telecommunications, for example, seems to cry out for national regulation of the integrated network. If ever there was an area that boosted the usual truisms about the integrated and interdependent economy, it is telecommunications. It is here that one should make the strongest case for the 1937 constitutional revolution over the scope of the commerce power. Yet telecommunications turns out to be an area in which the preservation of state jurisdiction over local phone business was systematically and rigorously guarded in the 1996 Act.<sup>9</sup>

No one claims that this is a constitutional principle today, but it does show that the driving force behind the Commerce Clause regulation was political and not technical. It is possible to make sure that individual states do not form barricades against communications across state lines without having to regulate directly the communications that take place within state borders. In this sense, the questions of jurisdiction come to ape the problems of property law. We have both the need for localism (as with private property) and for federalism (as with common networks). The ultimate equilibrium therefore cannot favor one extreme over the other. Rather it depends on a sound matching of property regime with resource type. Blackstone's vision of private property cannot, and did

9. Since this speech was given, the Supreme Court decided the jurisdictional question under the 1996 Act in favor of the F.C.C. But I still think (as someone who consulted with the Regional Bell Operating Companies on this case) that the 1996 Act did nothing to alter the traditional distribution of power between the F.C.C. and the state commissions. See *AT&T Corp. v. Iowa Utils. Bd.*, 119 S. Ct. 721, 733 (1999).

not, survive a serious structural holdout problem.

The inability to maintain regimes of private property in network industries carries with it important economic consequences. It is not possible to maintain the illusion of perfect competition in these industries, including cyberspace. It is just too risky to allow a single person or firm to occupy a stranglehold position with respect to the operation of the system, whether in telecommunications or in cyberspace. The introduction of the communication component has transformed computers from stand-alone Blackstone machines into a network industry which, in its own way, will have to make peace with the coordination problems that were first endemic to railroads and telephones. With telecommunications, there seems to be some government willingness to subsidize alternative carriers. Do we adopt the same policy with respect to Internet communications, and, if so, how does it manifest itself? Anyone who examines the fine print of the Telecommunications Act will not assume that state intervention carries with it an easy response.

In telecommunications, the shift was from the world of the 1982 Modified Final Judgment,<sup>10</sup> which created the local exchange monopolies who were under a duty to provide access to long distance carriers. The weaknesses in the system concerned the rates charged to end-use customers and the access fees charged for long distance calls. The newer system allows entry into local markets, but its Achilles heel is in determining the appropriate level of interconnection charges. Both of these systems have government mandated exchanges at prices that are set, or at least reviewed, by the state. Do we want to introduce that level of complexity into the cyberspace business, when the rate of innovation is such that the system we regulate today could be drastically transformed tomorrow?

In addition, we must recognize that competition in network businesses requires explicit levels of cooperation. The level of service that you supply to your customers depends in part on the level of service that your competitor supplies to his customers. The entire system thus requires cooperation in the maintenance of the system as well as competition in getting the larger fraction of the available business. In this setting, a firm might want to drive its rival out of business. If so, it must do so in a somewhat unusual way because of the social unacceptability of interruption in service to customers of

10. *United States v. American Tel. & Tel. Co.*, 552 F. Supp. 131 (D.D.C. 1982).

failing firms. Takeover, not liquidation, becomes necessary.

The problems with network industries are difficult for another reason. They tend to spill across separate jurisdictions. Which of those jurisdictions gets to regulate the operation of that industry, and why, become central questions. Once again the novelty of the technology should not blind us to the historical frequency of the problem. One of the classical issues of constitutional law under the dormant (or negative) Commerce Clause involves the coordination of federal and state power. It has long been understood that the federal government may regulate under the Commerce Clause over navigation and communication among the states. Yet it is equally clear that these network industries have local components that attract the interest of state regulators. Where the federal government chooses to assert its powers, it will prevail. Often, however, it is silent on these matters, and the issue arises whether, within these "great silences of the Constitution,"<sup>11</sup> the states retain power to regulate in response to local police power concerns.

That issue arose with both railroads and highways. One representative case is *Southern Pacific Co. v. Arizona*,<sup>12</sup> where the question was whether the state could impose length limitations on the trains running through it in order to advance the safety of local workers, as perceived by state authorities. The cost of this solution is for through-carriers to reconfigure their trains going in and out of the state (which itself raises safety risks), or to allow that single state that requires the shortest trains to set the standards for the entire nation. No per se rule came out of this trade-off, as the Court sought to balance the competing interests. In retrospect, what seemed decisive was that Arizona could point to nothing distinctive in its local topography and conditions that required deviation from the nationwide orientation. The case did not present, as did the earlier decision of *South Carolina v. Barnwell*,<sup>13</sup> a situation where the local roads were sufficiently narrow and dangerous that shorter trucks were required.

Here, it was an idiosyncratic judgment in response to standardized train conditions that led the United States Supreme Court to find that the federal interest trumped the local one. One clue to that result is that the Supreme Court clearly switched grounds

11. *H.P. Hood & Sons, Inc. v. Du Mond*, 336 U.S. 525, 535 (1949).

12. 325 U.S. 761 (1945).

13. 303 U.S. 177 (1938).

on the relative weight of federal and state interests after the introduction of the federal interstate highway program of 1956. Once the national roads were standardized on key safety dimensions, the willingness to allow individual states to deviate on the length of truck-trailer combinations was reduced, if only because the roads started to look more like railroad tracks.<sup>14</sup> And in the end, what happened there could well happen in cyberspace. The default rules leave too much to the imagination and to the vagaries of litigation. In their stead, one places a permanent federal institutional structure that passes on the need for deviations from the standardized federal rules.<sup>15</sup> The unmistakable subtext is that the presumption is now more firmly established for national uniformity over local control.

The same questions of coordination can take place on the Net, and will ultimately be resolved by the same lamentable balancing tests that were used to reconcile the national demands for a coherent transportation network with the local desires to respond to their distinctive situations. These tests will most likely be used in the local regulation of the content of information that is placed on the Net outside the local jurisdiction. As with the train cases, the nationalists among us will argue that any form of local regulation will necessarily set the standards for every other state within the system, even if the national consensus is heavily weighted in the other direction. Information travels across the wires at the speed of light, and it can be resent and redirected far more rapidly than freight in transit. Thus, we have a strong national interest in the open network free of nagging local regulation.

But, as is befitting for this industry, the local considerations may well be stronger, at least if we continue to believe that we have serious variations in national life and culture. The Supreme Court, in dealing with obscenity, has said more than once that local community standards must be taken into account in deciding on the propriety of various restrictions, and if these are thought to vary widely by state, then we have relatively strong interests on both sides of the scale and a consequent level of bitterness no matter which way the law resolves the issue. The battle, therefore, over regulation will take place at two levels: substance and jurisdiction. My own prediction is that the outcome we reached with respect to the interstate highways might

14. See *Kassel v. Consolidated Freightways Corp.*, 450 U.S. 662 (1981).

15. See Surface Transportation Assistance Act of 1982, 49 U.S.C. § 31,100 et seq. (1997 & Supp. 1999).



well be replicated with content regulation over the wires. The issue will be resolved at a national level. What substantive solution will emerge is anyone's guess, owing to the intractable conflict of visions between those who see government regulation as blatant censorship and those who see it as the exercise of traditional police power regulation over obscenity and pornography. It is very difficult to take a principled position that neither the federal nor the state governments have any role in controlling child pornography viewed within their respective jurisdictions.

There is only one way to avoid these difficulties, and that is to reduce the level of common interdependence that is found on the networks. One of the great virtues of a system of exclusive property rights in the Blackstone tradition is that it allows people with fundamentally different ways of thought to go their separate ways. On a public highway or beach, for example, someone has to set the standards of dress, and often nudists will come out second best in the contest. With private beaches and communities, however, the local standard can be set in defiance of the general norm, so that global minorities can become local majorities. In general, that is a healthy trend which we should applaud—if only we could find a way to bring it about.

That is where technology comes in. It will be a great advantage if Internet Service Providers (or for that matter, users) can block those sites that they regard as unsuitable for their own audiences. Once those protocols are established, then the private ability to wall off the world privately reduces the need to determine the content that goes over the general wires. We no longer have to worry about finding the sensitive political mean, and can instead have extensive traffic that can be privately monitored and controlled. As in so many other cases, what starts out as an intractable problem of collective choice can be made by technology into a set of discrete private decisions. The very technology that puts us on the common network can allow us to segment the portion of it that we receive.

What then is the moral of the story? It is that technology has the capacity to create legal problems such as those associated with network industries. It also has the capacity to solve those problems. Lest it be thought that we have not made any progress, we should all be clear that we are better off having an Internet with inferior regulations than no Internet at all. The issue is not whether we want to go back to some earlier order, but how we can do better with the

technology and legal arrangements that modern technology has provided.

In thinking about all this, it is critical to note that technology not only introduces new challenges but obviates older ones. My favorite illustration of this problem has to do with the classical doctrines of offer and acceptance in contract law. The nineteenth century case law was replete with discussions of whether the risk of a mis-sent offer or acceptance fell on the offeror or offeree. The basic principle held that the offeror could allocate the risk as he chose. Since that was rarely done the default rule took over the field. Learned discussions asked which rule would reduce the level of mis-sent communications, and the costs associated with those mix-ups. It is hard to believe that Langdell could rail against the dominant mailbox rule of *Adams v. Lindsell*<sup>16</sup> that treated an acceptance as binding when dropped into the post. But he did.<sup>17</sup>

This debate, however, misses the essential point. No matter what rule is devised, the error rate from mis-sent communications is too high. Rather than engage in fine-spun arguments to control its allocations, technology allows for near instantaneous communications between the parties so that the gaps and confusions are reduced. In the limit, if they go to zero, the risk allocation rule becomes irrelevant. In practice it has become far less important with faxes and telephones. A body of law that once was critical to basic contract theory has receded into the side waters. More often than not, any modern discussion of the rules of contract formation are not concerned with risk allocation, but with the classical choice of law question: if the law of the contract is determined by the place of its formation, then where was it formed? This is just the way it will be in cyberspace. What law of contract will govern transactions that are formed in a zillion different locations? Once again the key issue will be whether an offeror who cares about this issue (e.g., a bank with its many clients) can make its own rules govern by contract, to which the answer has to be yes (at least if the designated jurisdiction is chosen for all its rules, not just those that favor one side).

So the discussion runs its course. The question of whether new technology requires alteration of old rules is itself an old question that is insufficiently studied. It is not a new question that requires us to

16. 1 B. & Ald. 681, 106 Eng. Rep. 250 (K.B. 1818).

17. See CHRISTOPHER COLUMBUS LANGDELL, A SUMMARY OF THE LAW OF CONTRACTS 18-19 (2d ed. 1880).

start from scratch. In general, where private property and competitive solutions work, we can stick with older legal principles, and allow technology to transform the terms on which contracts are made, not the legal framework of the contract law. But once technology generates the risk of networks and interconnections, the substantive and jurisdiction issues become more complex. That's the way it has always been. And that is the way it will always be.